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FLESHNER & KIM, LLP			MACE, BRAD THOMAS	
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CHANTILLY, VA 20153			PAPER NUMBER	
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DATE MAILED: 11/01/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

# Office Action Summary

Application No.

09/838,553

Applicant(s)

CHOI ET AL.

Examiner

Brad T. Mace

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

## Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

## Status

- 1) ☒ Responsive to communication(s) filed on 4/20/01.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

## Disposition of Claims

- 4) ☒ Claim(s) 1-25 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-13 and 16-25 is/are rejected.
- 7) ☒ Claim(s) 14 and 15 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

## Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 20 April 2001 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☒ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

## Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some \* c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

## Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date \_\_\_\_\_.
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_\_.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_\_.

## **DETAILED ACTION**

### ***Specification***

1. The disclosure is objected to because of the following informalities:

On pg. 10, line "target base station 102" should be replaced with "target base station 104".

On pg. 11, line 18, "target base station 103" should be replaced with "mobile switching center 103".

On pg. 12, line 2, "target base station 103" should be replaced with "target base station 104".

On pg. 12, line 10, "mobile station 102" should be replaced with "mobile station 101".

Appropriate correction is required.

### ***Claim Objections***

2. Claims 3, 8, 15, 16, 18 are objected to because of the following informalities:

In claim 3, line 1, "second information" should be replaced with "second information call".

In claim 8, line 20, "mobile switch" lacks antecedent basis.

In claim 15, line 7, "mobile switch" lacks antecedent basis.

In claim 16, line 1, "the" should be placed between "wherein" and "communication".

In claim 18, line 3, "fist" should be replaced with "first".

Appropriate correction is required.

### ***Claim Rejections - 35 USC § 102***

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3. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

4. Claims 1, 3, 4, 5, and 6, are rejected under 35 U.S.C. 102(e) as being anticipated by U.S. Patent No. 6,549,787 (Ravi).

Regarding claim 1:

Ravi discloses a method of handoff in a CDMA communication system (col. 5, line 67 through col. 6, lines 1-3), comprising executing a handoff of a call connection of a first information call of a mobile station from a first base station to a second base station (col. 9, lines 10-29, where if the cell information is different, CMSR2 is processed and a handoff has occurred, and where voice (first information call) and data (second information call) are transferred, col. 6, lines 39-42);

comparing a packet zone identifier of a second information call transmitted from the second base station with a packet zone identifier maintained by the mobile station (col. 9, lines 10-29, where if the cell information is different from the cell information stored by the mobile station, CMSR2 is processed and a handoff has occurred, and where voice (first information call) and data (second information call) are transferred, col. 6, lines 39-42);

transmitting a call initializing message of the second information call from the mobile station to the second base station to request a handoff of the second information call if the packet zone identifiers are different (col. 9, lines 10-29, where the message control processor processes CMSR2 when the cell information is different from the cell information stored by the mobile station, hence a handoff to the second base station has occurred, and where voice (first information call) and data (second information call) are transferred, col. 6, lines 39-42).

Regarding claim 3:

Ravi discloses wherein the second information call is packet data (col. 6, lines 39-42, where voice (first information call) and data (second information call) are transferred).

Regarding claim 4:

Ravi discloses wherein an information transmission connection with the second base station is initialized after the mobile station completes an information transmission connection with the first base station in said handoff execution step from the first base station to the second base station (col. 9, lines 10-29, where if the cell information is different from the cell information stored by the mobile station, CMSR2 is processed and a handoff has occurred, hence an information transmission connection is initialized with a second base station since the message control processor ceased processing of CMSR1).

Regarding claim 5:

Ravi discloses wherein the packet zone identifier is transmitted from the second base station to the mobile station via a message in the information transmitted from the second base station (col. 9, lines 10-29, where the cell information identifies all of the base stations from which the mobile station is receiving signals and where the cell information is stored by the mobile station).

Regarding claim 6:

Ravi discloses wherein the message in the transmitted information is an in-traffic system parameter (col. 9, lines 10-29, where the mobile station receives cell information directly (in-traffic data) from base stations from which the mobile station is receiving signals).

***Claim Rejections - 35 USC § 103***

5. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

6. Claims 2, 7, 8, 9, 10, 11, 12, 13, 16, 17, 18, 19, 20, 21, 22, 23, 24, and 25, are rejected under 35 U.S.C. 103(a) as being unpatentable over U.S. Patent No. 6,549,787 (Ravi) in view of U.S. Publication No. 2001/0050907 (Madour et al.).

Regarding claim 2:

Ravi discloses substantially all the claimed invention as specified above, however, does not disclose expressly that the second information call is dormant.

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Madour et al. discloses a dormant (no data being transferred, paragraph [0041]) handoff performed from a Source BSC to a Target BSC, and from a Source PCF to a Target PCF (paragraph [0054]).

A person of ordinary skill in the art to which the invention pertains would have been motivated to employ Madour et al. in Ravi in order to perform a dormant handoff between a first base station and a second base station. At the time the invention was made, therefore, it would have been obvious to one of ordinary skill in the art to combine Madour et al. with Ravi (collectively Ravi-Madour et al.) to obtain the invention as specified in claims 1 and 2. The suggestion/motivation to do so would have been to also transfer dormant connections along with active (voice and data) information.

Regarding claim 7:

Ravi discloses a method of performing a handoff in a communication system, comprising performing a handoff of a first call of a subscriber unit from a first fixed station to a second fixed station (col. 9, lines 10-29, where if the cell information is different, CMSR2 is processed and a handoff has occurred);

receiving an In-traffic System Parameter Message having a packet zone identifier from the second fixed station over an air interface (col. 9, lines 10-29, where the mobile station receives cell information directly (in-traffic data) from base stations from which the mobile station is receiving signals);

comparing the packet zone identifier of the second fixed station transmitted in the In-traffic System Parameter Message with a packet zone identifier of the first fixed station stored in the subscriber unit to perform a handoff of a concurrent second call,

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wherein the first call is an active call and the second call is a packet data call (col. 9, lines 10-29, where the message control processor processes CMSR2 when the cell information (of second fixed station) is different from the cell information (of first fixed station) stored by the mobile station, hence a handoff to the second fixed station from the first fixed station has occurred, and where voice (first active call) and data (second active call) are transferred, col. 6, lines 39-42).

However, Ravi does not disclose expressly that the second call is a dormant packet data call.

Madour et al. discloses a dormant (no data being transferred, paragraph [0041]) handoff performed from a Source BSC to a Target BSC, and from a Source PCF to a Target PCF (paragraph [0054]):

A person of ordinary skill in the art to which the invention pertains would have been motivated to employ Madour et al. in Ravi in order to perform a dormant handoff between a first base station and a second base station. At the time the invention was made, therefore, it would have been obvious to one of ordinary skill in the art to combine Madour et al. with Ravi (collectively Ravi-Madour et al.) to obtain the invention as specified in claim 7. The suggestion/motivation to do so would have been to also transfer dormant connections along with active (voice and data) information.

Regarding claim 8:

Ravi further discloses transmitting an acknowledge order from the subscriber unit to the second fixed station to acknowledge receipt of the In-traffic System Parameter Message (Figure 11, reference 1106, and col. 17, lines 50-58).



Regarding claim 9:

Ravi further discloses transmitting a Handoff Complete message from the second fixed station to a switching center associated with the first and second fixed stations to indicate that the handoff is complete (Figure 11, reference 1136).

Regarding claim 10:

Ravi further discloses wherein an information transmission connection with the second fixed station is initialized after the subscriber unit releases an information transmission connection with the first fixed station after the handoff of the concurrent second call from the first fixed station to the second fixed station (col. 9, lines 10-29, where if the cell information is different from the cell information stored by the mobile station, CMSR2 is processed and a handoff has occurred from a first fixed station to a second fixed station, hence an information transmission connection is initialized with a second base station since the message control processor ceased processing of CMSR1, and where voice (first information call) and data (second information call) are transferred, col. 6, lines 39-42).

Regarding claim 11:

Ravi further discloses wherein the first call is one of a packet service call and a circuit service call (col. 6, lines 39-42, where voice and data are transferred).

Regarding claim 12:

Ravi discloses substantially all the claimed modified invention as specified above, however, does not disclose expressly wherein the handoff of the second information call is completed using a Packet Control Function.

Madour et al. discloses a dormant handoff performed from a Source PCF (Packet Control Function) to a Target PCF (paragraph [0054]).

A person of ordinary skill in the art to which the invention pertains would have been motivated to employ Madour et al. in Ravi in order to use a PCF (Packet Control Function) to perform a dormant handoff between a first base station and a second base station. At the time the invention was made, therefore, it would have been obvious to one of ordinary skill in the art to combine Madour et al. with Ravi (collectively Ravi-Madour et al.) to obtain the invention as specified in claims 7 and 12. The suggestion/motivation to do so would have been to use the PCF to help control the handoff of the dormant connection.

Regarding claim 13:

Ravi discloses substantially all the claimed modified invention as specified above, however, does not disclose expressly wherein the second information call uses a Point-to-Point Protocol (PPP) to communicate with a Packet Data Serving Node.

Madour et al. discloses a dormant handoff performed from a Source BSC to a Target BSC, and from a Source PCF to a Target PCF, where a PPP connection with the PDSN had been established (paragraph [0054]).

A person of ordinary skill in the art to which the invention pertains would have been motivated to employ Madour et al. in Ravi in order to perform a dormant handoff between a first base station and a second base station where a PPP connection with the PDSN had been established. At the time the invention was made, therefore, it would have been obvious to one of ordinary skill in the art to combine Madour et al. with

Ravi (collectively Ravi-Madour et al.) to obtain the invention as specified in claims 7 and 13. The suggestion/motivation to do so would have been to conform to standards where a PPP connection can be set up to communicate with a PDSN before handoff of a connection.

Regarding claim 16:

Ravi further discloses wherein the communication system is a CDMA communication system (col. 5, line 67 through col. 6, lines 1-3).

Regarding claim 17:

Ravi further discloses transmitting a call initializing message of the second packet data call from the subscriber unit to the second fixed station to request a handoff of the second information call if the packet zone identifiers of the first and second fixed stations are different (col. 9, lines 10-29, where the message control processor processes CMSR2 when the cell information is different from the cell information stored by the mobile station, hence a handoff to the second base station has occurred, and where voice (first information call) and data (second information call) are transferred, col. 6, lines 39-42), however, Ravi does not disclose expressly that the second information call is dormant.

Madour et al. discloses a dormant (no data being transferred, paragraph [0041]) handoff performed from a Source BSC to a Target BSC, and from a Source PCF to a Target PCF (paragraph [0054]).

A person of ordinary skill in the art to which the invention pertains would have been motivated to employ Madour et al. in Ravi in order to perform a dormant handoff

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between a first base station and a second base station. At the time the invention was made, therefore, it would have been obvious to one of ordinary skill in the art to combine Madour et al. with Ravi (collectively Ravi-Madour et al.) to obtain the invention as specified in claims 7 and 17. The suggestion/motivation to do so would have been to also transfer dormant connections along with active (voice and data) information.

Regarding claim 18:

Ravi discloses a method of performing a handoff in a mobile communication system comprising performing a handoff of an active first call from a first fixed station to a second fixed station (col. 9, lines 10-29, where if the cell information is different, CMSR2 is processed and a handoff has occurred, and where voice (first information call) and data (second information call) are transferred, col. 6, lines 39-42);

receiving a packet zone identifier from the second fixed station (col. 9, lines 10-29, where the cell information identifies all of the base stations from which the mobile station is receiving signals and where the cell information is stored by the mobile station);

transmitting a packet data call initialize message to the second fixed station if the packet zone identifier of the second fixed station is different than the packet zone identifier of the first fixed station (col. 9, lines 10-29, where the message control processor processes CMSR2 when the cell information is different from the cell information stored by the mobile station, hence a handoff to the second base station has occurred);

completing a handoff of a second call concurrently maintained on a single logical channel with the first call and the second call is a packet data call (col. 6, lines 39-42, where voice (first call) and data (second call) are both transferred (single logical channel)).

However, Ravi does not disclose expressly completing a dormant handoff using a Packet Control Function and where the second call is a dormant packet data call.

Madour et al. discloses a dormant handoff performed from a Source PCF (Packet Control Function) to a Target PCF (paragraph [0054]).

A person of ordinary skill in the art to which the invention pertains would have been motivated to employ Madour et al. in Ravi in order to use a PCF (Packet Control Function) to perform a dormant handoff between a first base station and a second base station. At the time the invention was made, therefore, it would have been obvious to one of ordinary skill in the art to combine Madour et al. with Ravi (collectively Ravi-Madour et al.) to obtain the invention as specified in claims 7 and 12. The suggestion/motivation to do so would have been to also transfer dormant connections along with active (voice and data) information and to use the PCF to help control the handoff of the dormant connection.

Regarding claim 19:

Ravi further discloses wherein the packet zone identifier is received from the second fixed station in an In-Traffic System Parameter message (col. 9, lines 10-29, where the mobile station receives cell information directly (in-traffic data) from base stations from which the mobile station is receiving signals).

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Regarding claim 20:

Ravi further discloses wherein a single subscriber unit maintains at least two calls on a single logical connection between a call controller and a switching center when the handoff is performed (col. 6, lines 39-42, where voice (first call) and data (second call) are both transferred (single logical channel) and col. 9, lines 10-29, where the connection is between a call controller (message control processor) and a switching center (mobile switching center, where the message control processor is internal to the mobile switching center)).

However, Ravi does not disclose expressly wherein one of the calls is a dormant packet data call.

Madour et al. discloses a dormant (no data being transferred, paragraph [0041]) handoff performed from a Source BSC to a Target BSC, and from a Source PCF to a Target PCF (paragraph [0054]).

A person of ordinary skill in the art to which the invention pertains would have been motivated to employ Madour et al. in Ravi in order to perform a dormant handoff between a first base station and a second base station. At the time the invention was made, therefore, it would have been obvious to one of ordinary skill in the art to combine Madour et al. with Ravi (collectively Ravi-Madour et al.) to obtain the invention as specified in claims 18 and 20. The suggestion/motivation to do so would have been to also transfer dormant connections along with active (voice and data) information.

Regarding claim 21:

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Ravi further discloses wherein the packet zone identifier of the first fixed station is stored in the subscriber unit to compare it to the packet zone identifier of the second fixed station (col. 9, lines 10-29, where the message control processor processes CMSR2 when the cell information (of the second fixed station) is different from the cell information (of the first fixed station) stored by the mobile station).

Regarding claim 22:

Ravi discloses a method of performing a handoff comprising performing a handoff of an active call from a first fixed station to a second fixed station (col. 6, lines 39-42, where voice (first information call) and data (second information call) are handoff between a first fixed station and a second fixed station);

receiving an In-traffic System parameter message from the second fixed station (col. 9, lines 10-29, where the mobile station receives cell information directly (in-traffic data) from base stations from which the mobile station is receiving signals);

performing a handoff of a packet call that is concurrently maintained with the active call based on information in the In-traffic System parameter message (col. 9, lines 10-29, where the mobile station receives cell information directly (in-traffic data) from base stations from which the mobile station is receiving signals and col. 6, lines 39-42, where voice (first information call) and data (second information call) are handoff between a first fixed station and a second fixed station).

However, Ravi does not disclose expressly where the packet call is a dormant packet call.

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Madour et al. discloses a dormant (no data being transferred, paragraph [0041]) handoff performed from a Source BSC to a Target BSC, and from a Source PCF to a Target PCF (paragraph [0054]).

A person of ordinary skill in the art to which the invention pertains would have been motivated to employ Madour et al. in Ravi in order to perform a dormant handoff between a first base station and a second base station. At the time the invention was made, therefore, it would have been obvious to one of ordinary skill in the art to combine Madour et al. with Ravi (collectively Ravi-Madour et al.) to obtain the invention as specified in claim 22. The suggestion/motivation to do so would have been to also transfer dormant connections along with active (voice and data) information.

Regarding claim 23:

Ravi further discloses wherein the In-traffic System parameter message includes a packet zone identifier of the second fixed station (col. 9, lines 10-29, where the mobile station receives cell information directly (in-traffic data) from base stations from which the mobile station is receiving signals and where the cell information identifies all of the base stations (such as the second fixed station)).

Regarding claim 24:

Ravi further discloses user equipment for a communication system, comprising means for maintaining two concurrent calls on a single logical connection (col. 6, lines 39-42, where voice (first call) and data (second call) are both transferred (single logical channel));



means for performing a handoff of an active one of the two concurrent calls from a first fixed station to a second fixed station (col. 9, lines 10-29, where the message control processor processes CMSR2 when the cell information is different from the cell information stored by the mobile station, hence a handoff to the second base station has occurred, and where voice (first information call) and data (second information call) are transferred, col. 6, lines 39-42);

means for storing a packet zone identifier of the first fixed station (col. 9, lines 10-29, where the message control processor processes CMSR2 when the cell information is different from the cell information stored by the mobile station, hence the information of the first fixed station is stored by the mobile station);

means for receiving an In-traffic System Parameter Message having a packet zone identifier from the second fixed station over an air interface (col. 9, lines 10-29, where the mobile station receives cell information directly (in-traffic data) from base stations from which the mobile station is receiving signals and where the cell information identifies all of the base stations (such as the second fixed station));

means for comparing the packet zone identifier of the second fixed station to the packet zone identifier of the first fixed station (col. 9, lines 10-29, where the message control processor processes CMSR2 when the cell information (of the second fixed station) is different from the cell information (of the first fixed station) stored by the mobile station);

means for performing a handoff of one of the two concurrent calls (col. 6, lines 39-42, where voice (first call) and data (second call) are both transferred).

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However, Ravi does not disclose expressly a dormant call handoff, where the dormant call is a dormant packet data call.

Madour et al. discloses a dormant (no data being transferred, paragraph [0041]) handoff performed from a Source BSC to a Target BSC, and from a Source PCF to a Target PCF (paragraph [0054]).

A person of ordinary skill in the art to which the invention pertains would have been motivated to employ Madour et al. in Ravi in order to perform a dormant handoff between a first base station and a second base station. At the time the invention was made, therefore, it would have been obvious to one of ordinary skill in the art to combine Madour et al. with Ravi (collectively Ravi-Madour et al.) to obtain the invention as specified in claim 24. The suggestion/motivation to do so would have been to also transfer dormant connections along with active (voice and data) information.

Regarding claim 25:

Ravi further discloses means for transmitting an acknowledge order to the second fixed station to acknowledge receipt of the In-traffic System Parameter Message (Figure 11, reference 1106, and col. 17, lines 50-58).

**Conclusion**

7. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Brad T. Mace whose telephone number is (571) 272-3128. The examiner can normally be reached on Monday -Thursday.

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If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Chau Nguyen can be reached on (571) 272-3126. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

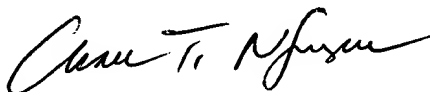
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ltm

Brad T. Mace  
Examiner  
Art Unit 2663

btm  
October 25, 2004

DMF



CHAU NGUYEN  
SUPERVISORY PATENT EXAMINER  
TECHNOLOGY CENTER 2600